

## ABSTRACT OF THE DISCLOSURE

A method for increasing the surface area of foil electrodes of electrolytic capacitors. A valve metal is deposited by evaporation on a valve metal foil in a low pressure inert atmosphere including oxygen at a pressure one to two orders of magnitude lower than the pressure of the inert gas. The resulting surface is fractal-like. The foil thus treated is suitable as such for use as a cathode. Prior to anodization to produce an anode, a discontinuous layer of a valve metal oxide is deposited on the foil, to preserve the high surface area of the fractal-like surface and otherwise promote the formation of a dielectric coating whose interface with the metal foil has a high surface area.